

***Navajo Nation – Puerco River Watersheds-  
Surface Water Quality  
Assessment Report (Integrated 305(b)  
Report and 303(d) Listing)***



(Photograph of Puerco River on July 1, 2009)

Prepared by:

Navajo Nation Environmental Protection Agency  
Water Quality Program  
Post Office Box 339  
Window Rock, Arizona 86515  
(928) 871-7690

February 10, 2017

## TABLE OF CONTENTS

1.0	Background and Purpose .....	1
2.0	Upper and Lower Puerco River Watersheds .....	2
3.0	Puerco River Watersheds Surface Water Quality Data Collection Activities .....	6
4.0	Puerco River Watersheds Surface Water Quality Data Assessment .....	6
5.0	References .....	43

## FIGURES

2.0.	Upper Puerco River Watershed (1756 square miles).....	3
2.1	Lower Puerco River Watershed (527 square miles) and Sample Site.....	4
	Detailed Geographic Locations of Upper Puerco River Watershed Sample Sites.....	4

## TABLES

2.0	Atlas of Assessed Surface Water Bodies with Known Lengths/Areas.....	6
	Upper Puerco River Watershed Sample Sites.....	9
	Lower Puerco River Watershed Sample Sites.....	40
4.0	Puerco River Watershed Sample Sites with limited data.....	8

## 1.0 Background and Purpose

The objective of the United States Clean Water Act (USCWA) is to "*restore and maintain* the chemical, physical, and biological integrity of the Nation's Waters" (USCWA, 1988). In order to meet this objective, and exert its sovereign authority to protect its water resources, the Navajo Nation codified the Navajo Nation Clean Water Act (NNCWA 1999) in July 1999. The importance of water to the Navajo Nation is clearly demonstrated by the adoption of the NNCWA, with the Navajo Nation being only one of a few tribes or states to adopt a formal clean water act. The NNCWA provides the legislative authority to allow the Navajo Nation to fulfill the USCWA requirements.

In order to *restore and maintain* the chemical, physical, and biological integrity of the Nation's Water, states and federally recognized tribes adopt water quality standards which protect the uses of the Nation's water bodies. Water quality standards are narrative and numeric criteria used as benchmarks to determine if a designated use for a water body is being attained. NNCWA Section 103(a) (2) (A) provides for "the establishment of water quality standards to protect fish and wildlife and the domestic, cultural, agricultural and recreational uses of the waters of the Navajo Nation." This is consistent with the "fishable and swimmable goal" set forth in USCWA Sections 101(a) (2) and 303(c) (2). NNCWA Sections 201(b) and (c) requires that designated uses be established for public water supplies, the protection and propagation of fish and wildlife, recreational purposes, agricultural (including livestock watering), industrial, cultural, and other uses, and to establish criteria to protect the designated uses.

The Navajo Nation first codified the 1999 Navajo Nation Water Quality Standards (1999 NNWQS) in July 1999 (NNEPA 1999). On January 20, 2006 the US Environmental Protection Agency (USEPA) approved the Navajo Nation's application to administer the Water Quality Standards and Certification Programs under the federal Clean Water Act's Sections 303 and 401. On March 26, 2009, the USEPA approved the 2007 Navajo Nation Surface Water Quality Standards (2007 NNSWQS) (NNEPA 2007). The 2015 Navajo Nation Surface Water Quality Standards (2015 NNSWQS) is the revision to the 2007 NNSWQS. The 2015 NNSWQS are currently being reviewed by the Navajo Nation before being submitted to the Navajo Nation Natural Resources Committee for adoption.

The Navajo Nation Environmental Protection Agencies (NNEPA) Water Quality / Navajo Nation Pollutant Discharge Elimination System Program (NNEPA WQ/NNPDES Program) is responsible for implementing the requirements of the USCWA and the NNCWA within the Navajo Nation.

This report fulfills the federal Clean Water Act Section (CWA) 305(b) reporting requirements, CWA 303(d) listing requirements, EPA's CWA § 106 Tribal Guidance, Chapter 8 and Appendix A, assessment reporting requirements, and FY 2016 National Water Program Guidance Measures WQ-06a. It also fulfills assessment reporting requirements in the “Navajo Nation Environmental Protection Agency Water Quality/Navajo Nation Pollutant Discharge Elimination System Program, Federal Clean Water Act Performance Partnership Grant” Work Plan.

The purpose of this report is to assess Upper and Lower Puerco River Watersheds surface water quality data obtained by the Navajo Nation Environmental Protection Agency Water Quality/NPDES Program (NNEPA WQP) by:

1. Presenting the surface water quality data;
2. Comparing the surface water quality data to the latest version of the Navajo Nation Surface Water Quality Standards to see if standards are being met;
3. Determine if uses designated for Upper Puerco River Watershed surface waters are being supported using the methods described in the February 20, 2008 NNEPA document entitled: “Guidance for Assessing the Quality of Navajo Nation Surface Waters to Determine Impairment” (Integrated 305(b) Reporting and 303(d) Listing); and
4. Make recommendations for further surface water quality data gathering.

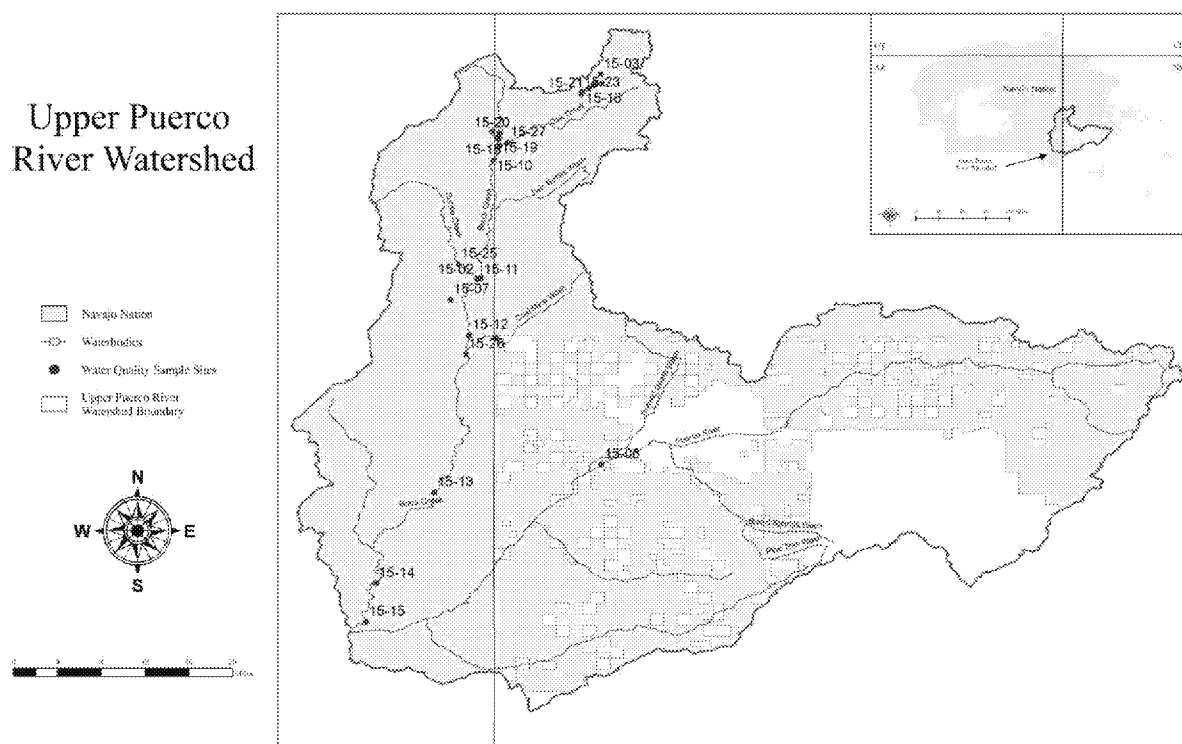
The Navajo Nation Puerco River Watersheds Surface Water Quality Assessment is intended to be a living document, which can be updated to include the latest surface water quality data. The NNEPA WQ/NNPDES Program welcomes all comments that will assist in revising this report in the future.

## 2.0 Upper and Lower Puerco River Watersheds

The Upper Puerco River Watershed (Figure 2.0) is located on approximately 1756 square miles within the Navajo Nation. The United States Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC) for the Upper Puerco River Watershed is 1502006 (USGS 1987). The NNEPA WQP watershed code for the Upper Puerco River Watershed River is 15. The Lower Puerco River Watershed (Figure 2.1) is located on approximately 527 square miles within the Navajo Nation. The United States Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC) for the Lower Puerco River Watershed is 15020007 (USGS 1987). The NNEPA WQP watershed code for the Lower Puerco River Watershed is 16. Detailed geographic

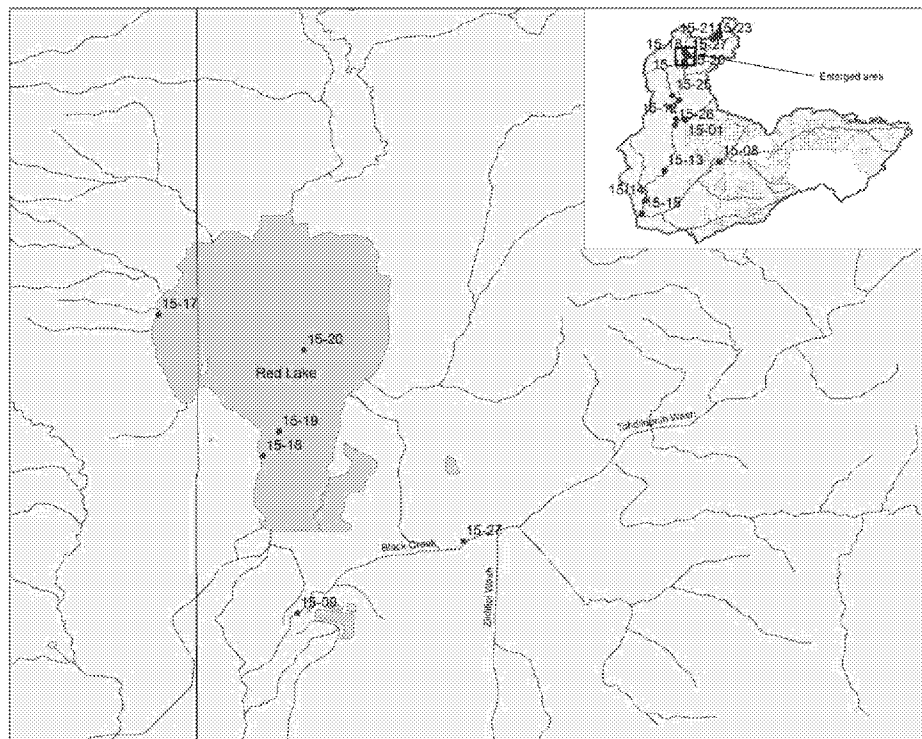
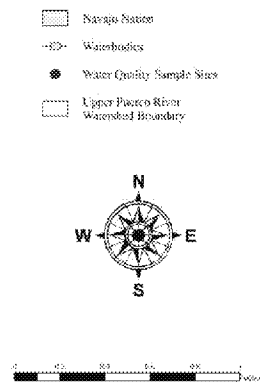
locations of watershed sampling sites are provided in additional maps following Figures 2.0 and 2.1. An atlas of water bodies with known lengths and areas assessed by the NNEPA WQP within these watersheds are listed in Table 2.0. There are a minimum of 205 miles of streams (rivers, washes, arroyos, or creeks) and 620 acres of lakes (lakes and reservoirs) in these watersheds.

**Figure 2.0 – Upper Puerco River Watershed (1756 square miles)**

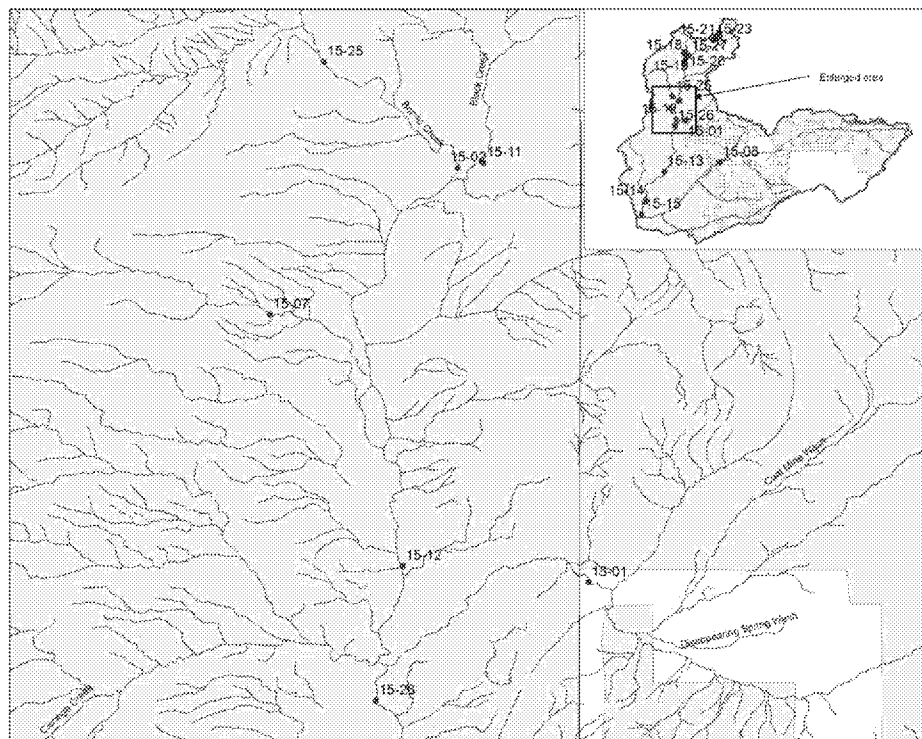
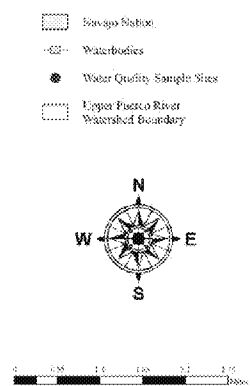




### Upper Puerco River Watershed Subset 2



### Upper Puerco River Watershed Subset 3



**Table 2.0 – – Atlas of Assessed Surface Water Bodies with Known Lengths/Areas**

(from Navajo Nation Department of Water Resources - March 31, 2009)

<b>Surface Water Body Name Within The Navajo Nation</b>	
<b>Streams (Rivers, Washes, Arroyos, Creeks)</b>	<b>Length (miles)</b>
Puerco River	91.02 miles
Black Creek	69.09 miles
Tohdildonih Wash	14.49 miles
Bonito Creek	19.45 miles
Asaayi (Bowl) Creek	11.83 miles
<b>Total Stream Miles Assessed</b>	<b>205.88 miles</b>
<b>Lakes (Lake or Reservoir)</b>	<b>Area (acres)</b>
Asaayi Lake	27.99 acres
Red Lake	592.12 acres
<b>Total Lake Acres Assessed</b>	<b>620.11 acres</b>

### 3.0 Puerco River Watersheds Surface Water Quality Data Collection Activities

Monitoring and water quality sampling of the Puerco River Watersheds was conducted using professional experience and in accordance with the NNEPA WQP June 1, 2012 “Quality Assurance Plan for Surface Water Data Collection” or previous quality assurance plans. Measurements of physical/ chemical characteristics and stream discharge were made. Samples were obtained and submitted to an analytical laboratory for analyses. Quality Assurance and Quality Control samples were also obtained.

### 4.0 Puerco River Watersheds Surface Water Quality Data Assessment

The following tables provide detailed information on each sample site. When available a site photograph is provided. The sample site name used for sampling is provided along with the alias used to locate the sample site on the watershed maps in Section 2.0 and a location description. The total number of years sampled is provided along with years sampled during the assessment period. The assessment period is the consecutive time period where a minimum number of samples must be obtained in order to determine designated use support. In most instances it is a three year consecutive period where a minimum of five samples must be obtained. (Please refer to the NNEPA Impairment Guidance). Water quality data at



each site was compared to the numeric standards in the 2007 NNSWQS. Uses designated for each water body in the 2007 NNSWQS are listed in each table. These uses may include Domestic Water Supply (Dom), Primary Human Contact (PrHC), Secondary Human Contact (ScHC), Fish Consumption (FC), Aquatic & Wildlife Habitat (Acute and Chronic) (A&WHbt (A) and A&WHbt (C)), Agricultural Water Supply (AgWS), and Livestock Watering (LW). Exceedances of the numeric standard are provided for any analyte for both the individual analyte and for the analytes corresponding to each designated use. Also provided are the percentages of exceedances from the number of samples obtained. The letter “n” refers to the number of samples obtained.

In some instances sample site locations may not be located at a Water of the Navajo Nation such as a canal but has been given the designated uses associated with the nearest known surface water listed in the 2007 NNSWQS. In those instances the water quality data obtained is used to determine the geographic distribution within the watershed of the analytes sampled.

At some of the sample sites shown in the geographic location maps of sample sites above, only limited data was obtained. (Also See Table 4.0). As a result these sample sites were not included in the data assessment tables.

There were no exceedances of the PrHC or AgWS designated use analytes within the watershed, therefore no tables are provided for them. Data assessment tables that are provided only include analytes with at least one exceedance within the watershed.

Analytes are listed in each table only if they have been found to have exceeded the numeric standard at any surface water sample site within the watershed. If, for example, aluminum is listed as an analyte at “Site X” but did not exceed the numeric standard at “Site X”, it is listed because it did exceed the numeric standard at another location within the watershed, “Site A”. The purpose of this is to try to understand the distribution of the analyte within the watershed.

The category of designated use support from the NNEPA Impairment Guidance may be found at the end of each table. Designated use support categories are determined, in part, by comparing the analytical result at each sample site to the 2007 NNSWQS. As mentioned in Section 1.0 revisions to the 2007 NNSWQS have been made and are contained within the draft 2015 NNSWQS. The draft 2015 NNSWQS contain new numeric standards and also new interpretations of how numeric standards support designated

uses. Additionally the NNEPA Impairment Guidance is scheduled for revision as well to reflect the changes in the 2015 NNSWQS. Once the 2015 NNSWQS are approved and the NNEPA Impairment Guidance is updated, the designated use support category assigned to the water bodies in this section may change. The NNEPA WQP may also choose list surface waters as impaired if it pursues primacy granted by USEPA for federal Clean Water Act Section 303(d).

To obtain the complete set of surface water quality analytical data from this watershed used in these tables please call 505-368-1037.

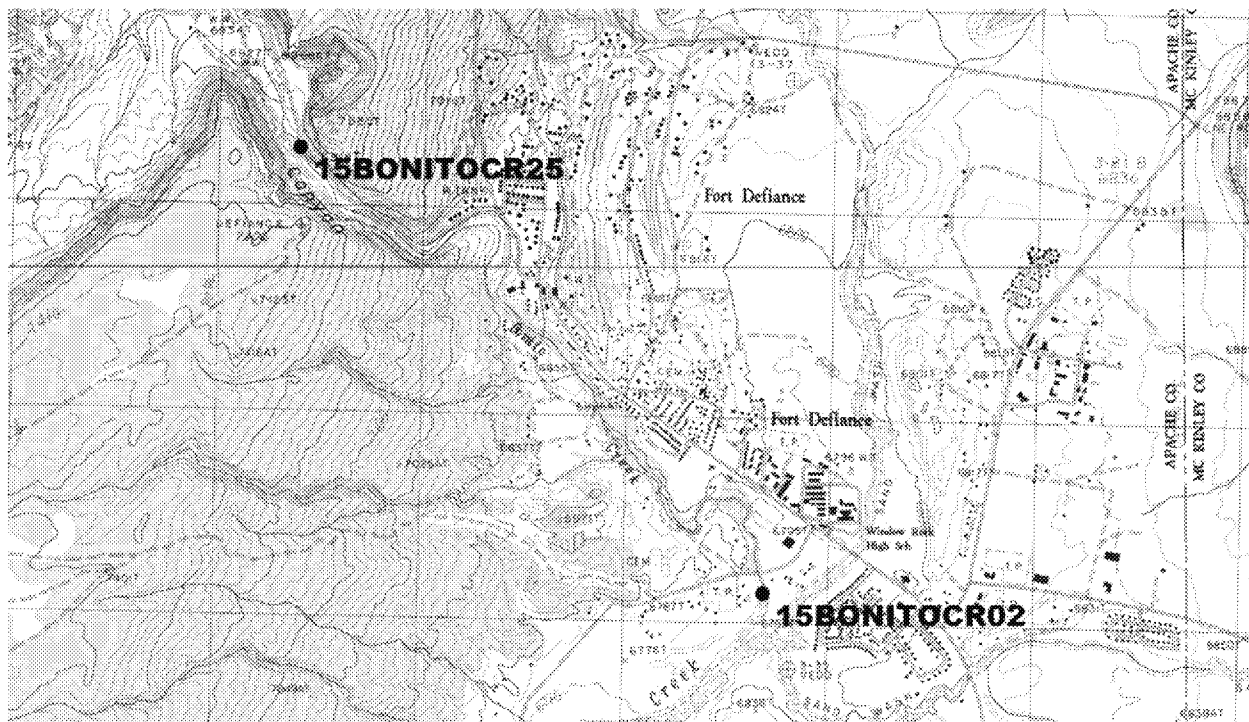
**Table 4.0 Puerco River Watershed Sample Sites with limited data.**

Site	Alias	Location	Date Sampled (Analytes*)
15TSEBONIT01	15-01	Tse Bonito Wash	09/23/1998 (FC)
15ASAAYIEA06	15-06	East Fork Asaayi Creek @ Asaayi Cr junction	09/05/2000 (EC, FC, FP, N, TSS)
15NATURALB07	15-07	Natural Bridge Canyon	09/18/1996 (FC); 09/19/1996 (FP); 08/26/1997 (FC); 09/21/1998 (FC); 09/29/1998 (TC)
15TOHDILDO09	15-09	Tohdildonih Wash @ mouth	08/29/2000 (FC, TSS)
15BLACKCRE10	15-10	Black Creek near Navajo NM	08/29/2000 (FC, Q, TSS)
15BLACKCRE11	15-11	Black Creek near Fort Defiance	08/23/2000 (FC, Q, TSS); 04/05/2001 (FC, Q, TSS)
15BLACKCRE12	15-12	Black Creek near Window Rock	08/29/2000 (FC, Q, TSS); 04/05/2001 (FC, Q, TSS)
15BLACKCRE14	15-14	Black Creek 5.5 miles upstream from I-40	08/23/2000 (FC, FP, Q, TSS)
15ASAAYILA16	15-16	Asaayi Lake north shore	07/25/2001 (FC, FP); 09/04/2002 (EC(P/A), FC); 09/11/2003 (FC); 09/14/2004 (FC); 07/18/2005 (FC)
15REDLAKEX17	15-17	Red Lake west shore	07/24/2001 (FC, FP); 09/10/2002 (EC(P/A), FC)
15REDLAKEX18	15-18	Red Lake southwest shore	07/24/2001 (FC, FP); 09/10/2002 (EC(P/A), FC)
15ASAAYIEA22	15-22	East Fork Asaayi Creek--upper	05/23/2001 (FP)
15ASAAYILA23	15-23	Asaayi Lake northwest shore	07/15/1997 (FC)

\*EC=*E.coli*; FC=fecal coliform; FP=field parameters (temperature, pH, TDS, SC, DO, ORP, and/or turbidity); N=nutrients (ammonia, nitrate, phosphorus, and orthophosphate); P/A=presence/absence; Q=streamflow; TC=total coliform; TSS=total suspended solids.

## Upper Puerco River Watershed Sample Sites

### Site 15BONITOCR02



**Map of Sites 15BONITOCR02 and 15BONITOCR25**

Site	Alias	Location
15BONITOCR02	15-02	Bonito Creek near Black Creek

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
1996-2001	11	1999-2001	4

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	0	0	0	0
A&WHbt (C)	0	0	0	0
LW	0	0	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	4	0.0%	0	4	0.0%
Thallium (T)	--	0	--	--	0	--

Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	--	0	--	--	0	--

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Zinc (D)	0	4	0.0%	0	4	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Chromium(VI) (D)	0	2	0.0%	0	2	0.0%
Copper (D)	0	4	0.0%	0	4	0.0%
Cyanide (T)	0	3	0.0%	0	3	0.0%
Mercury (T)	0	4	0.0%	0	4	0.0%
Selenium (T)	0	4	0.0%	0	4	0.0%
Zinc (D)	0	4	0.0%	0	4	0.0%

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	3	0.0%	0	3	0.0%
Gross alpha (Adj)	0	1	0.0%	0	1	0.0%
Lead (T)	--	0	--	--	0	--

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.

### Site 15BONITOCR25

Site	Alias	Location
15BONITOCR25	15-25	Bonito Creek in Blue Canyon

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
2002-2009	6	2003-2005	3

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	1	1	0	0
A&WHbt (C)	4	3	2	2
LW	1	1	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	6	0.0%	0	3	0.0%
Thallium (T)	0	4	0.0%	0	2	0.0%

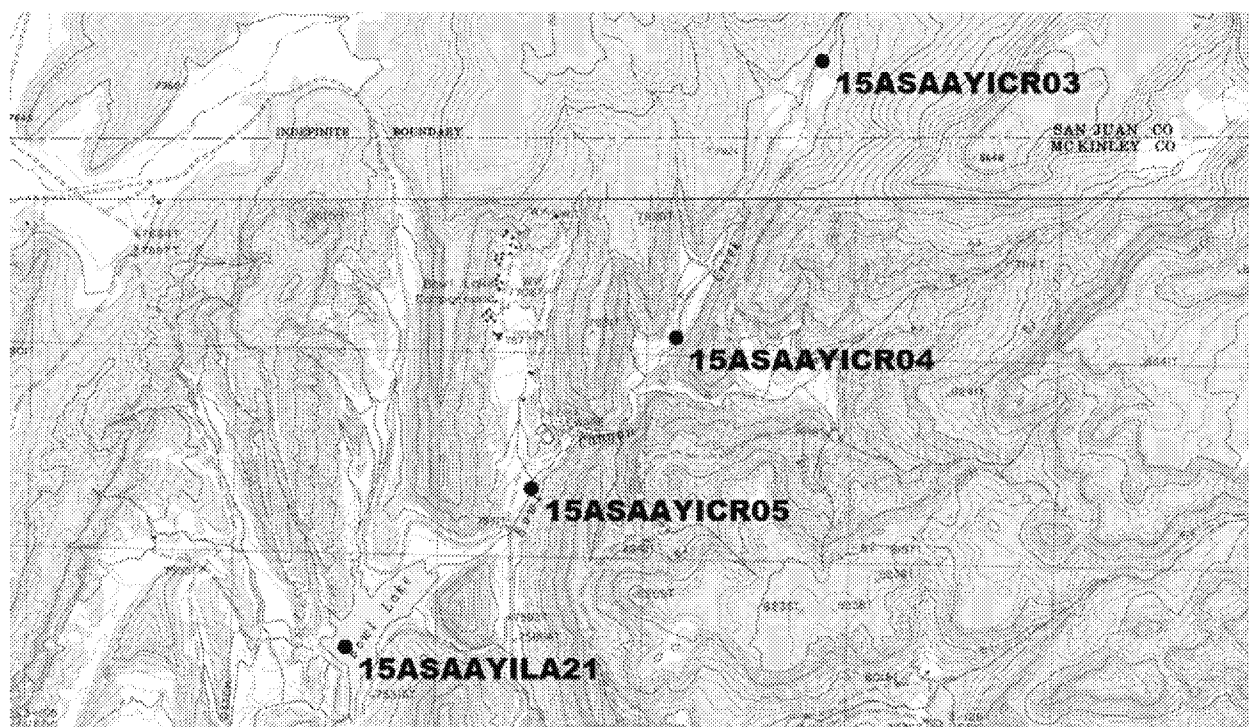
Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	0	4	0.0%	0	2	0.0%

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	1	4	25.0%	0	2	0.0%
Zinc (D)	0	6	0.0%	0	3	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	2	4	50.0%	1	2	50.0%
Chromium(VI) (D)	0	2	0.0%	0	1	0.0%
Copper (D)	0	6	0.0%	0	3	0.0%
Cyanide (T)	0	6	0.0%	0	3	0.0%
Mercury (T)	1	6	16.7%	0	3	0.0%
Selenium (T)	1	6	16.7%	1	3	33.3%
Zinc (D)	0	6	0.0%	0	3	0.0%

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	6	0.0%	0	3	0.0%
Gross alpha (Adj)	1	5	20.0%	0	3	0.0%
Lead (T)	0	4	0.0%	0	2	0.0%

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.

**Site 15ASAAYICR03****Map of sites 15ASAAYICR03, 15ASAAYICR04, 15ASAAYICR05, and 15ASAAYILA21**

Site	Alias	Location
15ASAAYICR03	15-03	Asaayi Creek upstream end of cattle exclusion

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
1998-1999	3	1998-1999	2

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	0	0	0	0
A&WHbt (C)	0	0	0	0
AgWS	0	0	0	0
LW	0	0	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	1	0.0%	0	1	0.0%
Thallium (T)	--	0	--	--	0	--

Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	0	1	0.0%	0	1	0.0%

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Zinc (D)	--	0	--	--	0	--

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Chromium(VI) (D)	--	0	--	--	0	--
Copper (D)	--	0	--	--	0	--
Cyanide (T)	--	0	--	--	0	--
Mercury (T)	0	1	0.0%	0	1	0.0%
Selenium (T)	0	1	0.0%	0	1	0.0%
Zinc (D)	--	0	--	--	0	--

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	--	0	--	--	0	--
Gross alpha (Adj)	--	0	--	--	0	--
Lead (T)	0	1	0.0%	0	1	0.0%

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.



**Site 15ASAAYICR04**

Site	Alias	Location
15ASAAYICR04	15-04	Asaayi Creek downstream end of cattle exclusion

\*Note that not all analytes were necessarily sampled each sample event.

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
1998-2007	11	1998-1999	2

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	0	0	0	0
A&WHbt (C)	0	0	0	0
AgWS	0	0	0	0
LW	0	0	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	1	0.0%	0	1	0.0%
Thallium (T)	--	0	--	--	0	--

Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	0	1	0.0%	0	1	0.0%

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Zinc (D)	--	0	--	--	0	--

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Chromium(VI) (D)	--	0	--	--	0	--
Copper (D)	--	0	--	--	0	--
Cyanide (T)	--	0	--	--	0	--
Mercury (T)	0	1	0.0%	0	1	0.0%
Selenium (T)	0	1	0.0%	0	1	0.0%
Zinc (D)	--	0	--	--	0	--

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	--	0	--	--	0	--
Gross alpha (Adj)	--	0	--	--	0	--
Lead (T)	0	1	0.0%	0	1	0.0%

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.

### Site 15ASAAYICR05



**Asaayi Creek on August 24, 2005**

Site	Alias	Location
15ASAAYICR05	15-05	Asaayi Creek @ gage

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
1995-2009	20	2000-2002	4

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	2	2	0	0
A&WHbt (C)	6	3	0	0
AgWS	0	0	0	0
LW	0	0	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	12	0.0%	0	4	0.0%
Thallium (T)	0	6	0.0%	0	0	--

Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	0	5	0.0%	0	0	--

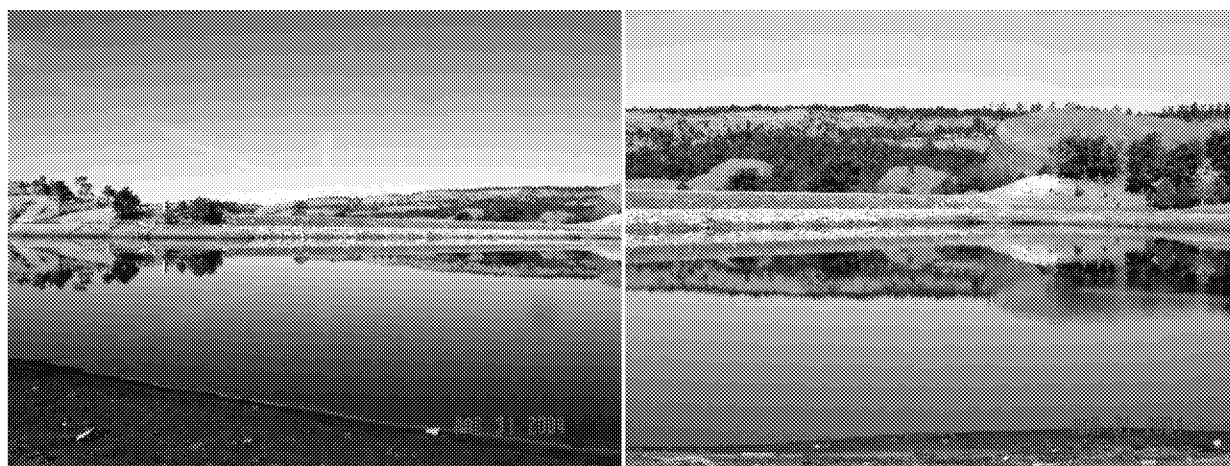
Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	1	4	25.0%	0	0	--
Zinc (D)	1	14	7.1%	0	4	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	4	4	100.0%	0	0	--
Chromium(VI) (D)	0	5	0.0%	0	3	0.0%
Copper (D)	0	14	0.0%	0	4	0.0%
Cyanide (T)	0	12	0.0%	0	4	0.0%
Mercury (T)	1	12	8.3%	0	4	0.0%
Selenium (T)	0	12	0.0%	0	4	0.0%
Zinc (D)	1	14	7.1%	0	4	0.0%

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	12	0.0%	0	4	0.0%
Gross alpha (Adj)	0	5	0.0%	0	0	--
Lead (T)	0	5	0.0%	0	0	--

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.

### Site 15ASAAYILA21



**Asaayi Lake on March 31, 2004**

Site	Alias	Location
15ASAAYILA21	15-21	Asaayi Lake near dam

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
2001-2005	5	2003-2005	3

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	0	0	0	0
A&WHbt (C)	0	0	0	0
AgWS	0	0	0	0
LW	0	0	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	5	0.0%	0	3	0.0%
Thallium (T)	--	0	--	--	0	--

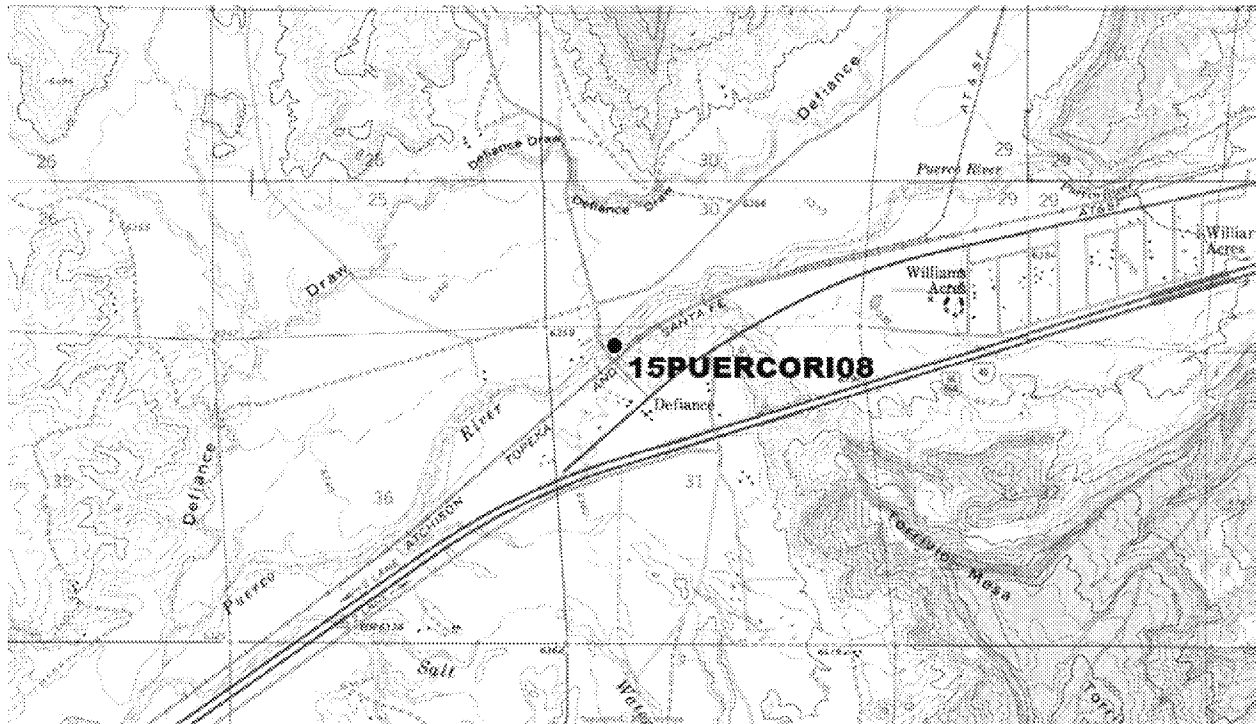
Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	--	0	--	--	0	--

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Zinc (D)	0	5	0.0%	0	3	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Chromium(VI) (D)	0	1	0.0%	0	0	--
Copper (D)	0	5	0.0%	0	3	0.0%
Cyanide (T)	0	1	0.0%	0	0	--
Mercury (T)	0	5	0.0%	0	3	0.0%
Selenium (T)	0	5	0.0%	0	3	0.0%
Zinc (D)	0	5	0.0%	0	3	0.0%

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	1	0.0%	0	0	--
Gross alpha (Adj)	--	0	--	--	0	--
Lead (T)	--	0	--	--	0	--

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.
- Additional Asaayi Lake surface water quality assessment information may be found in the July 2006 fish tissue study entitled: "Methylmercury and Other Environmental Contaminants in Water and Fish Collected from Four Recreational Fishing Lakes on the Navajo Nation, 2004".

**Site 15PUERCORI08****Map of site 15PUERCORI08****Trash in Puerco River on August 18, 2005 and July 1, 2009**



**Puerco River on March 31, 2004**



**Puerco River on September 15, 2004**



**Puerco River on August 18, 2005**





**Puerco River on May 21, 2008**



**Puerco River on July 1, 2009**

Site	Alias	Location
15PUERCORI08	15-08	Puerco River Down Gradient of Gallup WWTF

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
2000-2009	11	2004-2006	4

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
Dom	5	4	4	4
FC	1	1	1	1
SchC	2	1	1	1
A&WHbt (A)	6	1	3	1
A&WHbt (C)	12	5	6	4
LW	0	0	0	0

Analyte	Domestic Water Supply					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Arsenic (T)	1	7	14.3%	1	4	25.0%
Barium (T)	1	6	16.7%	1	4	25.0%
Beryllium (T)	1	6	16.7%	1	4	25.0%
Chromium (T)	0	6	0.0%	0	4	0.0%
Lead (T)	2	6	33.3%	1	4	25.0%

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	11	0.0%	0	4	0.0%
Thallium (T)	1	7	14.3%	1	4	25.0%

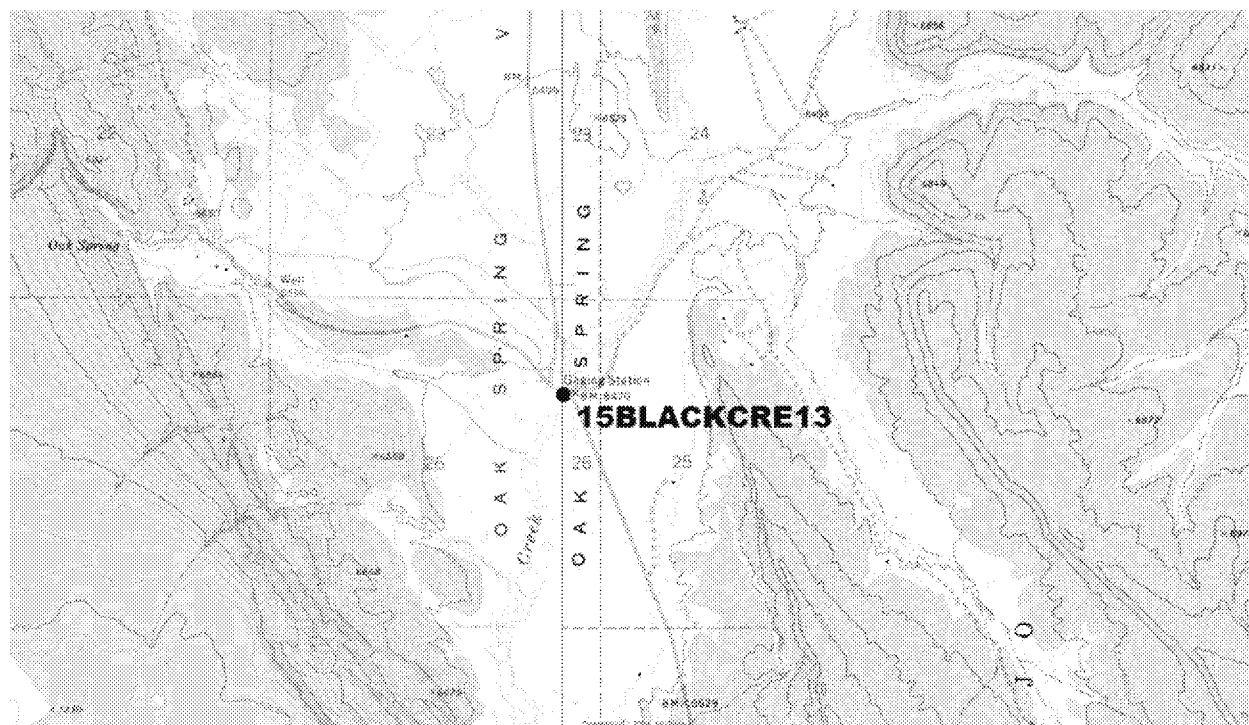
Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	2	6	33.3%	1	4	25.0%

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	6	6	100.0%	3	3	100.0%
Zinc (D)	0	11	0.0%	0	4	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	6	6	100.0%	3	3	100.0%
Chromium(VI) (D)	1	5	20.0%	1	1	100.0%
Copper (D)	1	11	9.1%	0	4	0.0%
Cyanide (T)	0	11	0.0%	0	4	0.0%
Mercury (T)	3	11	27.3%	1	4	25.0%
Selenium (T)	1	10	10.0%	1	4	25.0%
Zinc (D)	0	11	0.0%	0	4	0.0%

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	11	0.0%	0	4	0.0%
Gross alpha (Adj)	0	7	0.0%	0	3	0.0%
Lead (T)	0	6	0.0%	0	4	0.0%

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.

**Site 15BLACKCRE13****Map of site 15BLACKCRE13**

Site	Alias	Location
15BLACKCRE13	15-13	Black Creek near Oak Spring

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
2000-2003	2	2003	1

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	0	0	0	0
A&WHbt (C)	0	0	0	0
LW	0	0	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	1	0.0%	0	1	0.0%
Thallium (T)	--	0	--	--	0	--

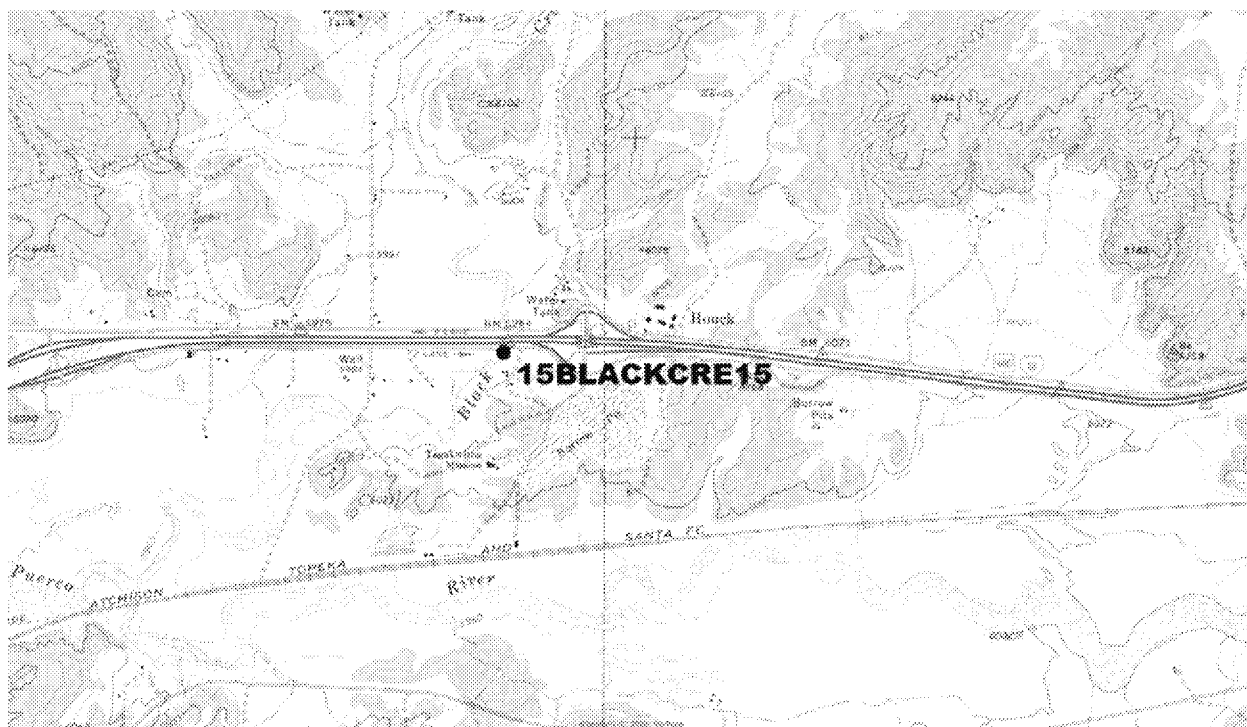
Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	--	0	--	--	0	--

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Zinc (D)	0	1	0.0%	0	1	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Chromium(VI) (D)	0	1	0.0%	0	1	0.0%
Copper (D)	0	1	0.0%	0	1	0.0%
Cyanide (T)	0	1	0.0%	0	1	0.0%
Mercury (T)	0	1	0.0%	0	1	0.0%
Selenium (T)	0	1	0.0%	0	1	0.0%
Zinc (D)	0	1	0.0%	0	1	0.0%

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	1	0.0%	0	1	0.0%
Gross alpha (Adj)	--	0	--	--	0	--
Lead (T)	--	0	--	--	0	--

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.

**Site 15BLACKCRE15****Map of site 15BLACKCRE15**

Site	Alias	Location
15BLACKCRE15	15-15	Black Creek @ I-40

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
2000-2001	2	2001	1

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	0	0	0	0
A&WHbt (C)	0	0	0	0
LW	0	0	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	1	0.0%	0	1	0.0%
Thallium (T)	--	0	--	--	0	--

Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	--	0	--	--	0	--

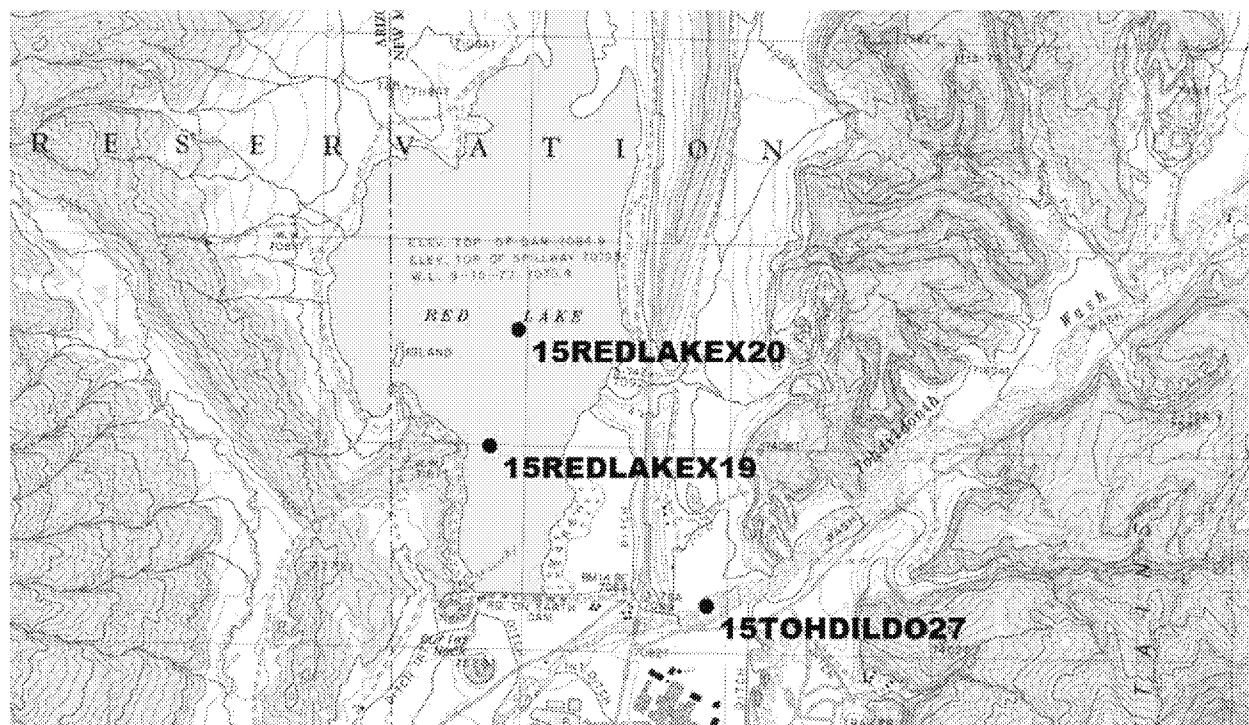
Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Zinc (D)	0	1	0.0%	0	1	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Chromium(VI) (D)	0	1	0.0%	0	1	0.0%
Copper (D)	0	1	0.0%	0	1	0.0%
Cyanide (T)	0	1	0.0%	0	1	0.0%
Mercury (T)	0	1	0.0%	0	1	0.0%
Selenium (T)	0	1	0.0%	0	1	0.0%
Zinc (D)	0	1	0.0%	0	1	0.0%

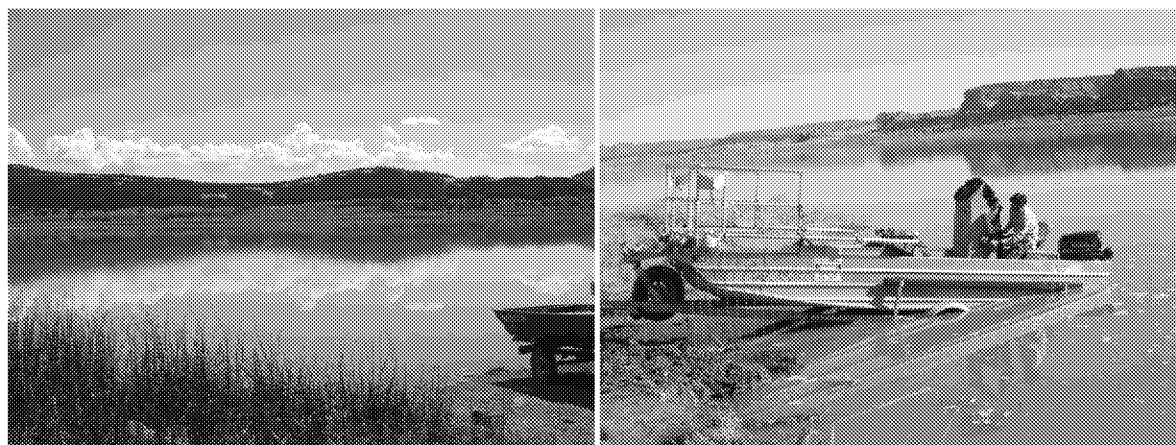
Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	1	0.0%	0	1	0.0%
Gross alpha (Adj)	--	0	--	--	0	--
Lead (T)	--	0	--	--	0	--

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.



**Site 15REDLAKEX19**

Map of sites 15REDLAKEX19, 15REDLAKEX20, and 15TOHDILDO27



Red Lake in 2004

Site	Alias	Location
15REDLAKEX19	15-19	Red Lake south end

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
2001-2009	8	2004-2006	3

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	0	0	0	0
A&WHbt (C)	4	3	3	3
LW	1	1	1	1

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	8	0.0%	0	3	0.0%
Thallium (T)	--	0	--	--	0	--

Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	--	0	--	--	0	--

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Zinc (D)	0	8	0.0%	0	3	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Chromium(VI) (D)	0	1	0.0%	0	0	--
Copper (D)	0	8	0.0%	0	3	0.0%
Cyanide (T)	1	4	25.0%	1	1	100.0%
Mercury (T)	2	8	25.0%	1	3	33.3%
Selenium (T)	1	8	12.5%	1	3	33.3%
Zinc (D)	0	8	0.0%	0	3	0.0%

\*Some cyanide hits are suspect due to locations and number of hits at other sites within the week

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	1	4	25.0%	1	1	100.0%
Gross alpha (Adj)	0	1	0.0%	0	0	--
Lead (T)	--	0	--	--	0	--

\*Some cyanide hits are suspect due to locations and number of hits at other sites within the week

- **Was the minimum number of samples to determine designated use support obtained during the assessment period? No.**
- **Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.**
- **Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.**
- **Additional Red Lake surface water quality assessment information may be found in the July 2006 fish tissue study entitled: "Methylmercury and Other Environmental Contaminants in Water and Fish Collected from Four Recreational Fishing Lakes on the Navajo Nation, 2004". Based on the results of this report a fish consumption advisory was issued for Red Lake in September 2005. Red Lake is currently dry awaiting dam repair.**

**Site 15REDLAKEX20**

Site	Alias	Location
15REDLAKEX20	15-20	Red Lake middle

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
2001-2009	7	2001-2003	3

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	0	0	0	0
A&WHbt (C)	3	2	0	0
LW	0	0	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	7	0.0%	0	3	0.0%
Thallium (T)	--	0	--	--	0	--

Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	--	0	--	--	0	--

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Zinc (D)	0	7	0.0%	0	3	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	--	0	--	--	0	--
Chromium(VI) (D)	0	1	0.0%	0	1	0.0%
Copper (D)	0	7	0.0%	0	3	0.0%
Cyanide (T)	0	4	0.0%	0	1	0.0%
Mercury (T)	2	7	28.6%	0	3	0.0%
Selenium (T)	1	7	14.3%	0	3	0.0%
Zinc (D)	0	7	0.0%	0	3	0.0%

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	4	0.0%	0	1	0.0%
Gross alpha (Adj)	0	1	0.0%	0	1	0.0%
Lead (T)	--	0	--	--	0	--

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.
- Additional Red Lake surface water quality assessment information may be found in the July 2006 fish tissue study entitled: "Methylmercury and Other Environmental Contaminants in Water and Fish Collected from Four Recreational Fishing Lakes on the Navajo Nation, 2004". Based on the results of this report a fish consumption advisory was issued for Red Lake in September 2005. Red Lake is currently dry awaiting dam repair.

### Site 15TOHDILDO27

Site	Alias	Location
15TOHDILDO27	15-27	Tohdildonih Wash upstream of Red Lake diversion

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
2008	1	2008	1

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	1	1	1	1
A&WHbt (C)	2	2	2	2
AgWS	0	0	0	0
LW	0	0	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	1	0.0%	0	1	0.0%
Thallium (T)	0	1	0.0%	0	1	0.0%

Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	0	1	0.0%	0	1	0.0%

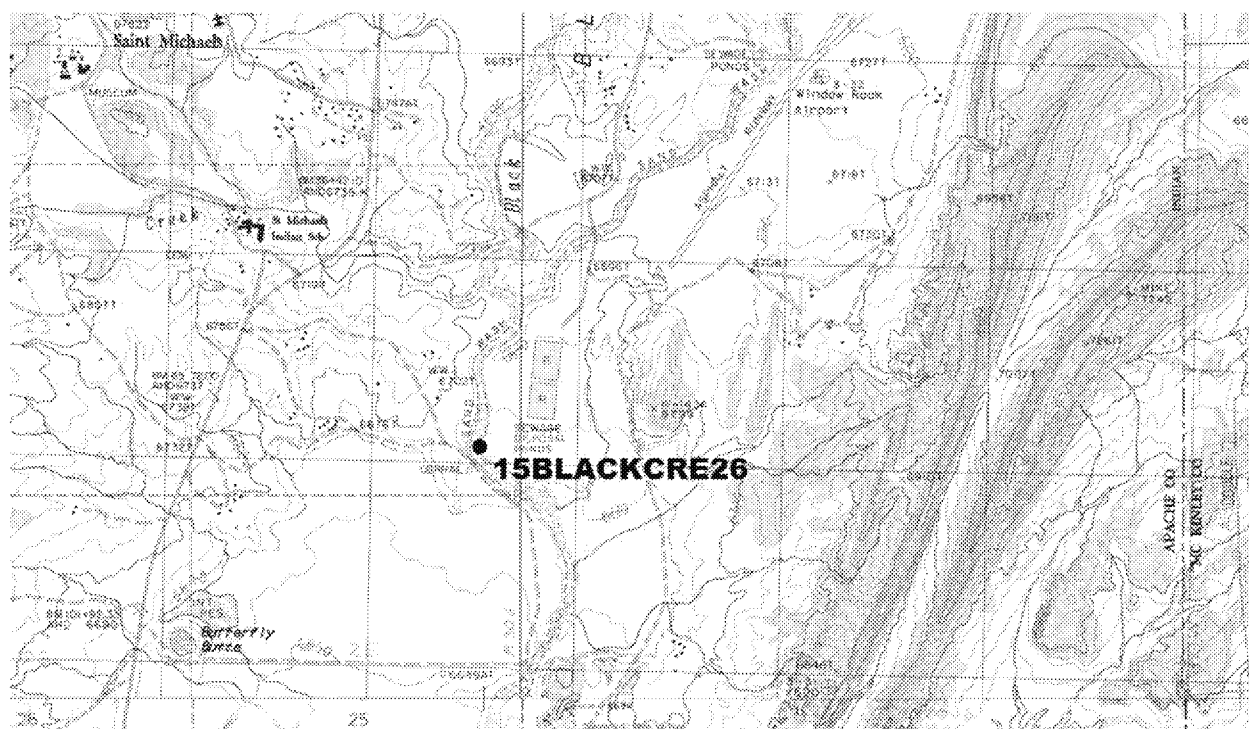
Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	1	1	100.0%	1	1	100.0%
Zinc (D)	0	1	0.0%	0	1	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	1	1	100.0%	1	1	100.0%
Chromium(VI) (D)	--	0	--	--	0	--
Copper (D)	0	1	0.0%	0	1	0.0%
Cyanide (T)	0	1	0.0%	0	1	0.0%
Mercury (T)	1	1	100.0%	1	1	100.0%
Selenium (T)	0	1	0.0%	0	1	0.0%
Zinc (D)	0	1	0.0%	0	1	0.0%

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	1	0.0%	0	1	0.0%
Gross alpha (Adj)	0	1	0.0%	0	1	0.0%
Lead (T)	0	1	0.0%	0	1	0.0%

- Was the minimum number of samples to determine designated use support obtained during the assessment period? No.
- Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.
- Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.
- 

### **Site 15BLACKCRE26**



**Map of site 15BLACKCRE26**

Site	Alias	Location
15BLACKCRE26	15-26	Black Creek downstream of Navajo WWTF discharge outlet

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
2008	1	2008	1

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
FC	0	0	0	0
PrHC	0	0	0	0
ScHC	0	0	0	0
A&WHbt (A)	1	1	1	1
A&WHbt (C)	2	2	2	2
LW	0	0	0	0

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	0	1	0.0%	0	1	0.0%
Thallium (T)	0	1	0.0%	0	1	0.0%

Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	0	1	0.0%	0	1	0.0%

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	1	1	100.0%	1	1	100.0%
Zinc (D)	0	1	0.0%	0	1	0.0%



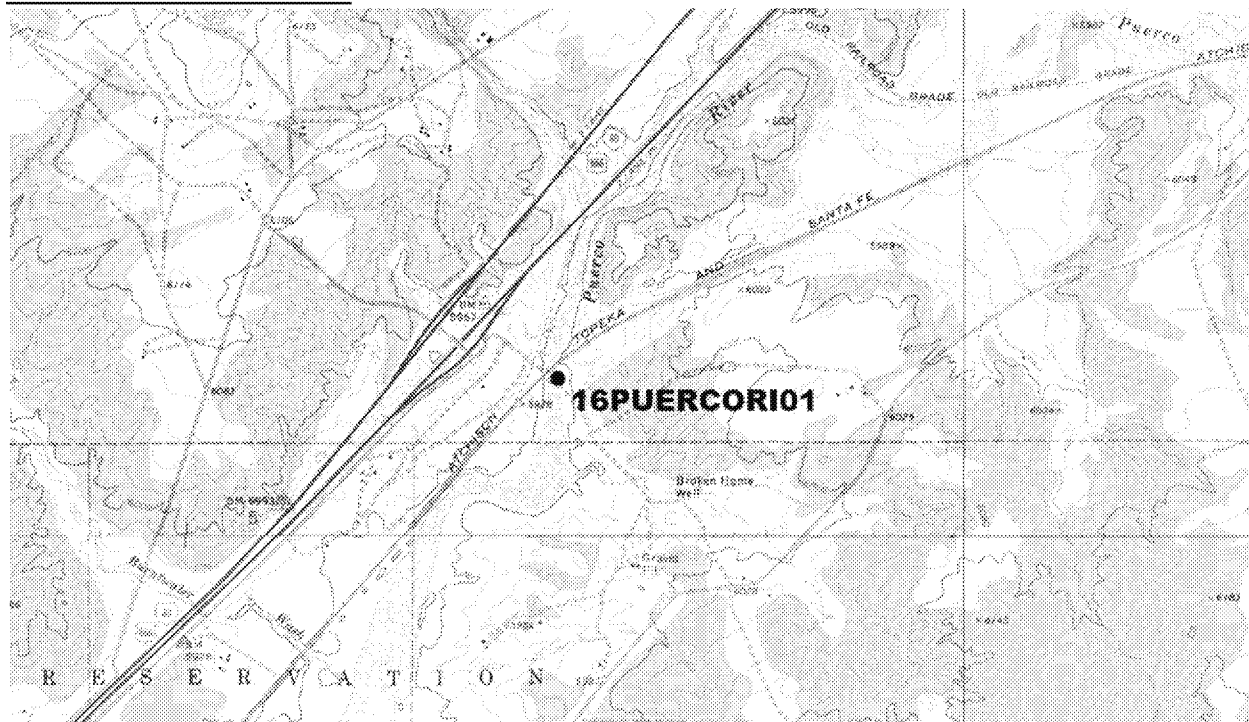
Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	1	1	100.0%	1	1	100.0%
Chromium(VI) (D)	--	0	--	--	0	--
Copper (D)	0	1	0.0%	0	1	0.0%
Cyanide (T)	0	1	0.0%	0	1	0.0%
Mercury (T)	1	1	100.0%	1	1	100.0%
Selenium (T)	0	1	0.0%	0	1	0.0%
Zinc (D)	0	1	0.0%	0	1	0.0%

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	1	0.0%	0	1	0.0%
Gross alpha (Adj)	0	1	0.0%	0	1	0.0%
Lead (T)	0	1	0.0%	0	1	0.0%

- **Was the minimum number of samples to determine designated use support obtained during the assessment period? No.**
- **Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.**
- **Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.**

## **Lower Puerco River Watershed Sample Sites**

### **Site 16PUERCORI01**



**Map of site 16PUERCORI01**



**Puerco River near Querino Wash on April 12, 2004**



**Puerco River near Querino Wash on March 16, 2005**

Site	Alias	Location
16PUERCORI01	16-01	Puerco River near Querino Wash

Total		Assessment period	
Year(s) sampled	# of Sample Events	Year(s) sampled*	# of Sample Events*
2003-2005	3	2003-2005	3

\*Note that not all analytes were necessarily sampled each sample event.

Designated Use	All samples		Assessment period	
	Total number of exceedances	Total analytes exceeded	Total number of exceedances	Total analytes exceeded
Dom	6	5	6	5
FC	1	1	1	1
ScHC	2	1	2	1
A&WHbt (A)	2	1	2	1
A&WHbt (C)	3	2	3	2
LW	1	1	1	1

Analyte	Domestic Water Supply					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Arsenic (T)	1	2	50.0%	1	2	50.0%
Barium (T)	1	2	50.0%	1	2	50.0%
Beryllium (T)	1	2	50.0%	1	2	50.0%
Chromium (T)	1	2	50.0%	1	2	50.0%
Lead (T)	2	2	100.0%	2	2	100.0%

Analyte	Fish Consumption					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Mercury (T)	1	3	33.3%	1	3	33.3%
Thallium (T)	0	2	0.0%	0	2	0.0%

Analyte	Secondary Human Contact					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Lead (T)	2	2	100.0%	2	2	100.0%

Analyte	Aquatic and Wildlife Habitat (Acute)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	2	2	100.0%	2	2	100.0%
Zinc (D)	0	3	0.0%	0	3	0.0%

Analyte	Aquatic and Wildlife Habitat (Chronic)					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Aluminum (T)	2	2	100.0%	2	2	100.0%
Chromium(VI) (D)	0	1	0.0%	0	1	0.0%
Copper (D)	0	3	0.0%	0	3	0.0%
Cyanide (T)	0	3	0.0%	0	3	0.0%
Mercury (T)	1	3	33.3%	1	3	33.3%
Selenium (T)	0	3	0.0%	0	3	0.0%
Zinc (D)	0	3	0.0%	0	3	0.0%

Analyte	Livestock Watering					
	All samples			Assessment period		
	Exceedances	n	Percent	Exceedances	n	Percent
Cyanide (T)	0	3	0.0%	0	3	0.0%
Gross alpha (Adj)	0	2	0.0%	0	2	0.0%
Lead (T)	1	2	50.0%	1	2	50.0%

- **Was the minimum number of samples to determine designated use support obtained during the assessment period? No.**
- **Category of Designated Use Support: Category 3 – There is insufficient data to determine if any designated use is supported.**
- **Recommendation is to use data obtained at this site to understand geographic distribution of listed analytes in the watershed.**

## 5.0 References

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